

# *Dispelling the Myth:* **Concrete Parking Lots Are Very Cost-Effective**

*By Vicki Parsons*

PHOTO BY MARK GALL



**W**hen Bradbury Plumbing began to build a new distribution facility in Kissimmee, Ron Bradbury knew he'd rather have a concrete parking lot, but he was sure he couldn't afford it. "Everybody knows concrete is much more expensive than asphalt," he said.

A couple of clicks on a computer keyboard, however, convinced him that he not only could afford concrete, but he could also save a significant amount of money over the long term. "My initial costs turned out to be right about the same price for concrete - or maybe even a little less than asphalt," he said.

The computer program, developed by the Florida Concrete & Products Association, allows users to plug in specifications for asphalt and anticipated costs. It creates an easy-to-understand report with recommended concrete specifications (using formulas developed by the American Concrete Institute) for a 20-year lifecycle analysis, including estimated costs for initial installation as well as maintenance for both concrete and asphalt.

"Concrete is very competitive with asphalt in parking lots up to about 40,000 square feet because of the high initial costs of getting the equipment needed to build an asphalt lot onsite," notes Diep Tu, director of parking area paving with the FC&PA. "Many people believe that concrete costs at least twice as much as asphalt when the truth is, concrete is very competitive in many situations."

Even a small asphalt parking lot requires a significant outlay in equipment and manpower, while a small to mid-sized concrete parking lot can be poured, placed and finished by a relatively small crew of workers, Tu said. Since labor costs typically represent a very large proportion of the total costs, the actual prices for concrete and asphalt parking lots can be similar.

"I'm continually amazed at how much people believe concrete parking lots cost until we make presentations and plug in actual numbers," said Andy Rowe of Cemex, chairman of the

FC&PA Parking Lot Group. "They think costs are 50 to 100 percent more, but the actual estimates turn out to be less than 10 percent higher - and most are under 5 percent."

Perhaps more importantly, concrete's lifecycle costs are significantly lower than those incurred with a traditional asphalt lot, adds Charles Wallin, sales manager for Florida Rock Industry's Central Florida Region. "Mr. Bradbury understood the value of concrete from a long-term perspective."

Bradbury reseals his current asphalt parking lot every year because it handles a lot of traffic from delivery trucks. "Some of those trucks are older and leak oil, which causes the asphalt to break down if it's not resealed often," he notes. "It's less expensive to keep resealing it than to have to replace it, but it was going to be very expensive to reseat 30,000 square feet of asphalt every year at this new building."

Having a concrete parking lot will also allow truck access to the entire building rather than just bays in front, he adds. "We haven't been letting the real heavy trucks in the back where they have to do three to five tight turns - that causes ruts in the asphalt, particularly during hot weather."

Asphalt needs regular resealing because its primary function is to serve as a water barrier that stabilizes and protects the layers of limerock and stabilized subgrade below it, Tu explains. As a petroleum product, asphalt is easily dissolved by other petroleum products, such as gasoline and oil. Florida's high temperatures also oxidize and break down asphaltic cement in the surface layer. As the top protective layer breaks down, water reaches the aggregates, which swell and lose strength. Small cracks develop, which allow

Bradbury Plumbing Project at a Glance...			
Life-Cycle Cost Program	Actual In-Place Cost	Asphalt Bid Cost	
\$61/cy \$4.05/sy labor	\$62/cy \$4.95/sy labor	1-1/2" S-III	\$13,400
		8" limerock base	\$31,300
		12" stab subgrade	\$ 6,600
Initial=\$46,200	=\$50,500	=\$51,300	
20-yr=\$49,700	=\$53,400	=\$97,600 (seal coat/2 yr; overlay/8 yr)	

more water into the substrate and the asphalt parking lot eventually falls apart.

The costs of protecting that substrate can add up dramatically over the typical 20-year life of a parking lot. A sample cost comparison with the FC&PA program indicates that maintenance costs for a typical asphalt parking area over 20 years may equal up to 80 percent of the original construction cost. (see chart for more details)

On the other hand, concrete requires only minimum maintenance when constructed properly by a certified finisher, primarily periodic restriping and cleaning, even under highly stressful conditions, Tu adds. In many cases, concrete parking lots also conserve energy demand to keep the buildings cool because they reflect light and can reduce surrounding temperatures by up to 10 degrees. That reflectivity also reduces the need for lights at night, saving both energy and installation costs.

Still, many people - including building owners, architects and engineers - aren't aware that concrete parking lots are a very cost-effective alternative to asphalt. "Everybody does asphalt, so we all just assume that it's the price differential because concrete is clearly a better

product," Bradbury said.

"The computer program makes it much easier for us to demonstrate the savings," adds Wallin. "Almost everyone we talk to is open to seeing what it can do because they would all prefer concrete if they thought the cost was even close to asphalt."

Nearly 60 concrete professionals in every part of the state have completed a four-day training program and offer complimentary presentations to owners, as well as architects, engineers and contractors, Rowe said. "We'll come in with a laptop and a projector and run the software using their numbers for asphalt costs, so they know we're right on target." In some cases, the presentation includes a certified concrete parking lot finisher who can answer specific questions.

"What we're doing is dispelling the myth that concrete is more expensive," Rowe adds. "The people we meet with are always surprised at the true cost, and I think they're very appreciative of the effort we've made as an industry to provide that information."

For more information or to set up a presentation that compares the costs of concrete and asphalt parking lots, contact the FC&PA at 800-342-0080. **FC**